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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,731	07/03/2003	Gerald A. Hutchinson	APTLTD.048A	7527

20995 7590 02/28/2007

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EXAMINER	
TSOY, ELENA	
ART UNIT	**PAPER NUMBER**
1762	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	02/28/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/28/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/614,731	HUTCHINSON ET AL.	
	Examiner	Art Unit	
	Elena Tsoy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14,16-19,52,53 and 55-95* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,16-19,52,53 and 55-95* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/17/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

Amendment filed on December 19, 2006 has been entered. Claims 1-14, 16-19, 52, 53, and 55-95 are pending in the application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Rejection of claims 2, 3, 52, 53, 55-57, 62-79 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been withdrawn due to amendment.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Rejection of claims 2, 16-19, 62-72 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been withdrawn due to amendment.

Claim Objections

5. Objection to claims 2, 58, 62, 73, 81, and 82 because of the informalities has been withdrawn due to amendment.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Rejection of claims 2, 3, 52 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883 in view of Mallya et al (US 6489387) has been withdrawn due to amendment.

8. Claims 1, 4, 68-71, 74, 75, and 77 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31, 32, 34-38 of U.S. Patent No. 6,676,883 in view of Mallya et al (US 6489387).

The Patent '883 fails to teach that the phenoxy-type coating of the two-ply laminate is further coated with a lubricant.

Mallya et al teach that coating glass or **plastic** bottles (See column 9, lines 55-56) with a low surface energy coating, such as polyethylene waxes (claimed low molecular polyethylene) and fatty acid salts, reduces scratching during conveying of bottles to filling and labeling stations (See column 9, lines 31-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied a low surface energy coating, such as polyethylene waxes) and fatty acid salts on the phenoxy-type coating of the two-ply laminate of Patent '883 with the expectation of reducing scratching during conveying of bottles to filling and labeling stations, as taught by Mallya et al.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Rejection of claims 2, 3, 52 under 35 U.S.C. 103(a) as being unpatentable over Farha in view of Noda, further in view of Mallya et al has been withdrawn due to amendment.

12. Rejection of claims 80, 83-95 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Maruhashi has been withdrawn due to amendment.

13. Rejection of claim 89 under 35 U.S.C. 103(a) as being unpatentable over Maruhashi in view of Fagerburg et al (US 4499262) has been withdrawn due to amendment.

14. Claims 1-7, 9-12, 14, 16, 17, 19, 52, 53, 55-79, 80-95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi (US 4,393,106) in view of Farha (US 5,472,753) and Noda (US 6,872,802) for the reasons of record set forth in paragraph 22 of the Office Action mailed on 7/19/2006.

15. Claims 1, 4, 68-71, 74, 75, and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farha in view of Noda, further in view of Mallya et al for the reasons of record set forth in paragraph 23 of the Office Action mailed on 7/19/2006.

16. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi in view of Farha and Noda, further in view of Cobbs, Jr et al (US 4,573,429) for the reasons of record set forth in paragraph 24 of the Office Action mailed on 7/19/2006.

17. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi in view of Farha and Noda, further in view of Kennedy (US 4,505,951) for the reasons of record set forth in paragraph 25 of the Office Action mailed on 7/19/2006.

18. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi in view of Farha and Noda, further in view of Dworak et al (US 6,350,796) for the reasons of record set forth in paragraph 26 of the Office Action mailed on 7/19/2006.

19. Claim 89 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruhashi in view of Farha and Noda, further in view of Fagerburg et al (US 4499262) for the reasons of record set forth in paragraph 28 of the Office Action mailed on 7/19/2006.

Response to Arguments

20. Applicants' arguments filed December 19, 2006 have been fully considered but they are not persuasive.

(A) Applicants argue that none of Claims 31, 32, and 34-38 of the '883 Patent independent discloses aqueous solutions or dispersions of the coating material. In addition, Claims of the '883 Patent and Mallya are not properly combinable. Neither the cited Claims of the '883 Patent nor Mallya disclose any teaching, suggestion, or incentive to combine the two references. The Examiner has not shown that there would be any reasonable expectation of success to apply an aqueous solution of low surface energy coating such as "a polyethylene wax" to a first coating of phenoxy-type thermoplastic. A skilled artisan may expect that these coatings would have poor adhesion given their inherent polarities.

The Examiner respectfully disagrees with this argument. Clearly solutions or dispersions of the coating material of Claims of the '883 Patent are based on a solvent. Since solvent is not limited to particular ones, the solvent includes any solvent including organic solvent and water.

Mallya et al teach that coating **glass** or *plastic* bottles (See column 9, lines 55-56) with a low surface energy coating, such as polyethylene waxes (claimed low molecular polyethylene) and fatty acid salts, reduces scratching during conveying of bottles to filling and labeling stations (See column 9, lines 31-35). Therefore, in contrast to Applicants argument, one of ordinary skill in the art would have reasonable expectation of success of applying a lubricant coating to *polar* glass bottles.

(B) Applicants argue that rejection over a combination of Maruhashi, Farha and Noda has to be withdrawn because they are not properly combinable. Marushashi fails to teach several elements: (1) aqueous solutions or dispersions of phenoxy-type materials; (2) the aqueous solutions or dispersions comprising Phenoxy-type materials may be applied to an article by dip, spray or flow coating: (3) a second coating layer includes a coating material different than first phenoxy-type resin which may be applied as an aqueous solution or dispersion on the substantially dried first coating by dip, spray, or flow coating. To remedy, the deficiencies of Maruhashi, the Examiner combines Maruhashi with Farha. However, Farha only describes that such two or three layered containers may be made by coextrusion (col. 11, lines 18 through col. 12, line 22) or coinjection (col. 12, lines 22-37) processes. Moreover, the combination of Maruhashi and Farha is improper. Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. Maruhashi, in fact, teaches away from its combination with Farha. Specifically, in column 6, lines 23 through 28 of Maruhashi, it states that "the copolymer that is used in the present invention is ordinarily difficult to mold by heating and melting, and therefore, the copolymer of the present invention is used for coating a plastic bottle substrate in the form of an organic solvent solution or an aqueous emulsion or latex." The coinjection or coextrusion processes used to form the articles of Farha are methods that heat and melt the polymers which form the layers of the containers. The Examiner has not indicated why a person of ordinary skill in the art would combine Maruhashi which teaches that coating by aqueous solution is not interchangeable with Farha which teaches melt molding methods such as the coinjection or coextrusion processes. The Examiner asserts on page 7, lines 24-25 of the Office Action that "extrusion coating of a hot melt is functionally equivalent to roller coating, brush coating, dip coating, spray coating using aqueous solutions or emulsion" and cites Noda for this proposition. Applicants believe that the Examiner has overstated the proposition described by Noda in these sections. Noda does not describe "extrusion coating" and dip, spray, and flow coating as functional equivalents. Noda simply describes that any one of these coating processes may be used to form a coating of polyhydroxyalkanoate copolymers, to which Noda is specifically directed. Noda does not broadly teach or suggest that every

thermoplastic polymer material may be coated by any of the specified techniques. This is further confirmed by the teaching of Maruhashi, as referenced above, that all coating techniques are not interchangeable for other coating techniques such as extrusion. Moreover, the Examiner has not shown any teaching, suggestion, or motivation for combining Noda with Maruhashi or Farha. Noda specifically describes methods for digesting polyhydroxyalkanoate containing articles with hot alkaline solutions.

The Examiner respectfully disagrees with this argument. In column 6, lines 23 through 28, Maruhashi states that "the copolymer that is used in the present invention is **ordinarily difficult** to mold by heating and melting, and therefore, the copolymer of the present invention is used for coating a plastic bottle substrate in the form of an organic solvent solution or an aqueous emulsion or latex." Furthermore, at column 12, lines 12-14, Maruhashi teaches that the **protecting** layer (of e.g. epoxy resin) may be formed by **melt molding** instead of coating with the *aqueous* latex or organic solvent solution. In other words, Maruhashi teaches that **if a resin can be melted**, it can be applied by melting or in the form of *aqueous* latex or organic solvent solution. Thus, in contrast to Applicants argument, Maruhashi does not teach away from melting or from its combination with Farha.

Noda teaches that coated articles may be formed using any conventional coating technique, such as extrusion (melting) coating, roller coating, brush coating, dip coating, spray coating, electrostatic coating, centrifugal coating and cast coating (See column 18, lines 19-26). Coatings are applied as solutions in organic solvents, as aqueous solutions or emulsions, as a hot melt (solid molten or softened by heat); extrusion coating is similar to hot-melt coating (See column 18, lines 37-43). Thus, Noda also teaches that **if a (PHA containing) resin can be melted**, it can be applied as a hot melt (solid molten or softened by heat) or as solutions in organic solvents, as aqueous solutions or emulsions by **brush coating, dip coating, spray coating**.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a mixture of the thermoplastic copolyester and thermoplastic poly(hydroxy amino ethers) for forming a first coating layer 6 in Maruhashi instead of mixture of thermoplastic polyvinylidene chloride and glycidyl methacrylate with the expectation of providing the desired good oxygen barrier properties combined with excellent mechanical

properties since Farha teaches that a coating layer of a mixture of phenoxy-type thermoplastic and a thermoplastic amorphous copolyester provides a PET container with good oxygen barrier properties combined with excellent mechanical properties, and the mixture of the thermoplastic copolyester and thermoplastic poly(hydroxy amino ethers) adheres to PET substrate because the amorphous copolyester constituent is compatible and forms a bond with the PET substrate, and Noda teaches that extrusion coating of a hot melt of Farha is functionally equivalent to roller coating, brush coating, dip coating, spray coating using aqueous solutions or emulsions.

Thus, one of ordinary skill in the art would have motivation to combine Maruhashi with Farha and Noda, and one of ordinary skill in the art would have reasonable expectation of success of applying meltable resin of Farha to bottles of Maruhashi as aqueous solutions or dispersions by brush coating, dip coating, spray coating, as taught by Noda.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ELENA TSOY
PRIMARY EXAMINER

Elena Tsoy
Primary Examiner
Art Unit 1762

February 21, 2007